Message

From: Erber, Nathan (EGLE) [ErberN@michigan.gov]
Sent: 12/14/2021 12:37:03 PM
To: Finn, Molly [Finn.Molly@epa.gov]; Ostaszewski, Arthur (EGLE) [ostaszewskia@michigan.gov]; Voisin, Valerie [Voisin.Valerie@epa.gov]
CC: Jacob Runge [RungeJ@michigan.gov]; Dale Bridgford [BRIDGFORDD@michigan.gov]; Ostaszewski, Arthur (EGLE) [ostaszewskia@michigan.gov]
Subject: RE: NEW perimeter characterization of 2022 at BASF NW- Additional Parameters to consider from EPA letter to BASF NW (August 2016) interim response action required

Molly and Valerie,
On a separate note, would you mind sharing what you have regarding the most recent GW model (the report and any modeling scripts or files)? I looked through our files and cannot find anything.
Thanks,
Nate

Nathan R. Erber, M.S.
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From: Finn, Molly <Finn.Molly@epa.gov>
Sent: Monday, December 13, 2021 11:08 PM
To: Ostaszewski, Arthur (EGLE) <OSTASZEWSKIA@michigan.gov>; Voisin, Valerie <Voisin.Valerie@epa.gov>
Cc: Runge, Jacob (EGLE) <RungeJ@michigan.gov>; Erber, Nathan (EGLE) <ErberN@michigan.gov>; Bridgford, Dale (EGLE) <BRIDGFORDD@michigan.gov>; Ostaszewski, Arthur (EGLE) <OSTASZEWSKIA@michigan.gov>
Subject: RE: NEW perimeter characterization of 2022 at BASF NW- Additional Parameters to consider from EPA letter to BASF NW (August 2016) interim response action required

Thanks, Art. I know there was a fair amount of communication after the 2015 CMS submittal that pre-dates Valerie and my involvement. I will talk with Valerie and we can go back through the 2016 letter you shared. Maybe we can talk more about this on our call next Monday.

Thanks,
Molly

From: Ostaszewski, Arthur (EGLE) <OSTASZEWSKIA@michigan.gov>
Sent: Monday, December 13, 2021 10:02 AM
To: Finn, Molly <Finn.Molly@epa.gov>; Voisin, Valerie <Voisin.Valerie@epa.gov>
Cc: Jacob Runge <RungeJ@michigan.gov>; ErberN <ErberN@michigan.gov>; Dale Bridgford <BRIDGFORDD@michigan.gov>; Ostaszewski, Arthur (EGLE) <ostaszewskia@michigan.gov>
Subject: NEW perimeter characterization of 2022 at BASF NW- Additional Parameters to consider from EPA letter to BASF NW (August 2016) interim response action required

Molly, Valerie,

Attached is EPAs letter to BASF NW in August of 2016 asking for an Interim Groundwater Measure to commence at BASF NW.
In the letter, EPA identified several parameters of concern that I noticed were not a part of the recent 2021 Arcadis proposed
characterization of perimeter groundwater (TEAMS call Dec 09, 2021) for a potential 2022? interim GW stabilization from the facility,
as asked for by EPA-RCRA in 2016.

Particularly absent from the 2021 proposed characterization, based on the 2016 EPA Interim Response letter are:
Vanadium, Cyanide, Thallium, Chromium, and Arsenic.

Please consider having Arcadis include the above parameters in the 2021-22 perimeter characterization interim response, per EPA past recommendations.

Thanks,
Art

Attached and below (excerpts) is the August 2016 EPA letter,

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

LU-9J

August 26, 2016

Mr. Michael Gerdenich
Remediation Senior Specialist
BASF Corporation
1609 Biddle Avenue
Wyandotte, Michigan 48192-3729

RE: Review of BASF North Works CMS
1609 Biddle Avenue
North Works, BASF Corporation
Wyandotte, Michigan 48192-3729
EPA ID# MID 064 197 742

Dear Mr. Gerdenich:

This letter provides a review of the groundwater portion of the draft Corrective Measures Study (CMS) for the BASF North Works facility, dated June 25, 2015. The BASF North Works facility ("Site" or "North Works") is located at 1609 Biddle Avenue, Wyandotte, Michigan on the shore of the Detroit River. EPA provided BASF with an overview of its position regarding the groundwater portion of the CMS in a teleconference on June 2, 2016 that included the Michigan Department of Environmental Quality (MDEQ). The comments conveyed in this letter correspond to EPA's position outlined during the June teleconference and concern the proposed remediation of groundwater at the North Works Site under RCRA Corrective Action (CA). Based upon a review of the CMS, EPA has determined that stabilization of the Site through a groundwater Interim Measure is needed.

The CMS presents various alternatives to groundwater remediation and identifies a site-wide "perimeter groundwater management strategy" as BASF's preferred remedial approach. In developing the alternative approaches, BASF characterized the nature and extent of on-site contamination at North Works using a SWMU/AOC-based investigative approach, and did not consider the impacts of the underlying fill on groundwater quality. Because of the large volume

A) Groundwater flow impacted by the Site SWMUs, AOCs and fill discharges either directly or indirectly to the Detroit River. Indirect discharge includes the groundwater leaving the Site along the northern and southern boundaries through adjoining properties.

B) The BASF North Works facility is located directly upstream of a drinking water intake for the City of Wyandotte. Consequently, MDEQ GSI criteria for the Site to the River are based on drinking water criteria as well as aquatic and wildlife criteria. Neither pH nor mercury are allowed mixing zones to determine if the discharge will result in water quality standard exceedances. MDEQ criteria include a maximum pH value of 8.5 and, for mercury, which is classified by the MDEQ as a Bioaccumulative Chemical of Concern (BCC), discharges above 0.2 ug/L require a "response action appropriate to achieve a goal of the surface water quality standard of 1.3 ng/L" (MDEQ Policy and Procedure, Number 09-014). Demonstrating mercury GSI compliance through a de minimis evaluation may not be allowable. However, if permitted, the evaluation would be based upon on-site groundwater samples collected

post-treatment and upgradient of the Detroit River. The compliance demonstration for all parameters in the remedial monitoring program will be subject to MDEQ approval.

C) Data available from the RCRA Remedial Facility Investigation (RFI) and CMS-labelled wells in the ePRISM website and collected during the various Site investigations and monitoring events suggest that the on-site fill directly impacts the facility's groundwater quality. The ePRISM website provides information about contaminant concentrations relative to potentially applicable criteria and other values cited below to assess groundwater quality:

a. An average pH of 9.4 with individual pH values in excess of 13 (GSI value is 8.5 pH;
b. An average mercury concentration of 3.21 ug/L, with individual concentrations up to 10.7 ug/L (MDEQ's groundwater surface water interface (GSI) value is 0.0013 ug/L; background is approximately 0.002 ug/L);
c. An average vanadium concentration exceeding 303 ug/L (background is approximately 1.7 ug/L);
d. Cyanide concentrations up to 41,000 ug/L with an average of 1,669 ug/L (the MCL is 200 ug/L and the water quality standard is 5.2 ug/L);
e. An average thallium concentration of 9.2 ug/L (the MCL is 2.0 ug/L);
f. An average chromium concentration of 283 ug/L (the MCL is 100 ug/L and the water quality standards for chromium III and chromium VI are 74 ug/L and 11 ug/L respectively); and,
g. An average arsenic concentration of 69 ug/L (the background concentration is approximately 4ug/L, the MCL is 10 ug/L and the water quality standard is 150 ug/L).

Arthur Ostaszewski

EGLE UAS Drone Program Coordinator
Environmental Quality Specialist

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